NIWA's NDSC UV/Visible Measurements at the Mauna Loa Observatory

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The National Institute of Water and Atmospheric Research (NIWA) started Network for the Detection of Stratospheric Change (NDSC)-certified ultraviolet (UV)/ visible spectroscopic measurements of stratospheric nitrogen dioxide (NO_2) in July 1996 at the CMDL Mauna Loa Observatory (MLO). In December 1999 a new UV/visible spectrometer was installed to measure stratospheric bromine monoxide (BrO), an important species, in current attempts to model future nonpolar ozone trends. In addition to this instrument, a second NO_2-measuring spectrometer was installed in the NDSC building. The BrO instrument makes what is expected to be defined as NDSC standard measurements; however, full certification cannot be completed until a community BrO instrument intercomparison is undertaken. This is planned for March 2003.

Measurements of NO_2 and BrO have been successfully made on most days over the reported period. Although one of the two NO_2 instruments failed in December 2000 and could not be repaired until August 2001, the backup NO_2 spectrometer maintained data continuity. The data were presented at the 2001 NDSC Symposium [*Kreher et al.*, 2001].

NO_2 data measured at MLO in the NDSC database have been archived to the end of 2000.

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REFERENCE

Kreher, K., P.V. Johnston, G.E. Bodeker, J.A. Burrowes, J.B. Liley, and M.P. Chipperfield, Time series of NO_2 data at low, middle and high latitudes: Observations and comparison with model results, paper presented at Network for the Detection of Stratospheric Change (NDSC) 2001 Symposium "Celebrating 10 Years of Atmospheric Research," NDSC, Palais des Congrès "Le Palatium," Arcachon, France, September 24-27, 2001.